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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,588	09/29/2004	John P Banovetz	56172US003	2525
32692	7590	12/08/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			NORDMEYER, PATRICIA L	
PO BOX 33427			ART UNIT	
ST. PAUL, MN 55133-3427			PAPER NUMBER	

1772

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/509,588

Applicant(s)

BANOVETZ, JOHN P

Examiner

Patricia L. Nordmeyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-28,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-28,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Withdrawn Objections/Rejections

1. The objection to claim 21 in the office action dated July 5, 2006 is withdrawn due to Applicant's amendment in the response dated October 5, 2006.
2. The 112 2nd paragraph rejection of claims 17 – 31 in the office action dated July 5, 2006 is withdrawn due to Applicant's amendment in the response dated October 5, 2006.
3. The 102(b) rejection of claims 17 – 19, 22 – 26, 29, 30 and 31 as anticipated by in the office action dated July 5, 2006 is withdrawn as Applicant's amendments and arguments in the response dated October 5, 2006 are found to be persuasive.

Repeated Rejections

4. The 103(a) rejection of claims 20, 21, 27 and 28 over Calhoun et al. (USPN 5,344,681) in view of Williams et al. (USPN 5,462,797) in the office action dated July 5, 2006 is repeated as Applicant's amendments and arguments in the response dated October 5, 2006 are found to be unpersuasive. The rejection is repeated below for Applicant's convenience.

Calhoun et al. disclose an adhesive tape (Column 1, lines 15 – 18) comprising at least one layer of radiation curable precursor of an adhesive (Column 6, lines 28 – 30 and line 41) and at least one film having two essentially parallel surfaces wherein at least one of said surfaces which

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is in contact with said radiation curable precursor (Figure 1, #11 and 14), comprises a series of recesses therein (Column 4, lines 43 – 46) and can be removed from said radiation curable precursor (Figure 3). However, Calhoun et al. fails to disclose the radiation curable polymer materials selected from the group comprising epoxy containing polymer materials and/or polymer materials with unreacted vinyl groups and/or unreacted (meth)acrylated groups, the optional non-radiation curable polymer materials selected from a group consisting of polyolefins, polyester, (meth)acrylate polymers, polyurethanes, fluoropolymers, ethylene-vinyl acetate polymers, rubber bases polymer and blends thereof, the radiation curable adhesive layer being reinforced by a layer of non-woven material and the ratio of the thickness of the reinforcing layer to the thickness of the radiation curable adhesive layer is from 0.1 to 0.9.

Williams et al. teach an pressure sensitive adhesive composition (Column 2, lines 64 – 65) made with radiation curable polymer materials selected from the group polymer materials with unreacted vinyl groups and/or unreacted (meth)acrylated groups (Column 32, lines 40 – 43), the optional non-radiation curable polymer materials selected from a group consisting of polyester (Column 7, line 29), (meth)acrylate polymers (Column 7, line 30), polyurethanes (Column 32, line 44) and effective amount of a photoinitiator (Column 32, lines 47 – 48), the radiation curable adhesive layer being reinforced by a layer of non-woven material (Column 17, lines 10 – 11) and the ratio of the thickness of the reinforcing layer to the thickness of the radiation curable adhesive layer is from 0.1 to 0.9 (Column 16, lines 71 – 53; Column 17, lines 10 – 11, wherein the ration would fall between 0.1 to 0.9 depending on the thickness of the adhesive selected since the material is mixed with the adhesive) for the purpose of forming an

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adhesive material where the viscosity is controlled through the polymerization of the material and the photoinitiator (Column 17, lines 53 – 62).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the composition of the radiation curable polymers that form the adhesive in Calhoun et al. in order to form an adhesive material where the viscosity is controlled through the polymerization of the material and the photoinitiator as taught by Williams et al. since Calhoun et al, states that the type of pressure sensitive adhesive is not critically limited.

Election/Restrictions

5. Applicant's election without traverse of Group I, claims 17 – 31 in the reply filed on October 5, 2006 is acknowledged.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claims 17 – 28, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The phrases “said radiation curable precursor exhibits a loss tangent of at least 1 at a temperature of 50 °C” in claim 17 and “said adhesive exhibits a loss tangent of between 1-10 at 50 °C” in claim 18 are unclear, which render the claims vague and indefinite. The specification is silent with regard to how the loss tangent is measured, what exactly the loss tangent is measuring.

Claims 18 – 28, 30 and 31 are also rejected under 35 U.S.C. 112 2nd due to their dependency on the above rejected claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 17 – 19, 22 – 26, 29, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Calhoun et al. (USPN 5,344,681).

Calhoun et al. disclose an adhesive tape (Column 1, lines 15 – 18) comprising at least one layer of radiation curable precursor of an adhesive (Column 6, lines 28 – 30 and line 41) and at least one film having two essentially parallel surfaces wherein at least one of said surfaces which is in contact with said radiation curable precursor (Figure 1, #11 and 14), comprises a series of recesses therein (Column 4, lines 43 – 46), wherein the depth of the recesses is less than 0.25

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mm and is not critically limited to the stated depth (Column 8, lines 10 – 13), and therefore would read on the claim limitation, and can be removed from said radiation curable precursor (Figure 3) as in claim 17. The adhesive exhibits a loss tangent of between 1-10 at 50 °C, and therefore, the radiation curable precursor exhibits a loss tangent of at least 1 at a temperature of 50 °C as in claims 17 and 18 due to the similar materials being used (Column 6, lines 28 – 57). With regard to claim 19, the radiation curable precursor comprises at least one radiation curable polymer materials (Column 6, line 41), and due to the optional language of the claim, the one or more non-radiation curable polymer materials and an effective amount of a photoinitiator do not have to be present. The film comprises either a polymer film or paper (Column 7, lines 62 – 64) as in claim 22. With regard to claims 23 – 26, the recess have a cross-sectional shape selected from polygonal or circle (Column 8, lines 19 – 22, wherein the circle would be curved), the number of recesses are four per centimeter (Column 8, lines 33 – 35) or 16 per centimeter (Column 10, line 17), the recesses form a pattern (Column 6, lines 7 – 9) and the ratio of the sum of the average extension of the projections and the average depth of the recesses to the average of the radiation curable adhesive layer is at least 0.2 (Column 10, lines 16 – 22). As in claim 29, the adhesive tape comprises a backing (Column 8, lines 58 – 60). The radiation curable precursor is tacky (Column 6, lines 47 – 48) as in claim 30. Regarding claim 31, the adhesive tape is wound up in the form of a roll (Column 4, line 46).

Response to Arguments

10. Applicant's arguments filed October 5, 2006 have been fully considered but they are not persuasive.

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In response to Applicant's argument that Calhoun et al. fails to disclose recesses having an average depth of between 15 and 50 micrometers, Calhoun et al. disclose that the depth of the recesses is less than 0.25 mm and is not critically limited to the stated depth (Column 8, lines 10 – 13), and therefore would read on the claim limitation.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (571) 272-1496. The examiner can normally be reached on Mon.-Thurs. from 10:00-7:30 & alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patricia L. Nordmeyer
Examiner
Art Unit 1772

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12/1/06